



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/524,592

02/15/2005

Francesco Bonfanti

11157US

6558

30008 7590 11/15/2007
GUDRUN E. HUCKETT DRAUDT
SCHUBERTSTR. 15A
WUPPERTAL, 42289
GERMANY

EXAMINER

HIGGINS, GERARD T

ART UNIT

PAPER NUMBER

4174

MAIL DATE

DELIVERY MODE

11/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,592	Applicant(s) BONFANTI ET AL.	
	Examiner Gerard T. Higgins, Ph.D.	Art Unit 4174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/15/2005 and 07/12/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the reference EP 0781634 cited in the Search Report has not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

3. The disclosure is objected to because of the following informalities: on page 4, line 9 applicants say “be can arranged,” which should be “can be arranged.” Additionally, applicants refer on page 3, lines 20 and 22 to “lines that extend perpendicularly” and “perpendicularly to said first direction;” however, the proper part of speech is the adjective not the adverb in these instances.

Appropriate correction is required.

Claim Objections

4. Claim 15 is objected to because of the following informalities: the same rationale seen in section 3 above is appropriate here in that both uses of the word perpendicularly should be the adjective form, not the adverb. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 2-3 of applicants' claim 14 there is the limitation "several of the at least one dividing line extending parallel to one another." This is an extremely confusing phraseology and the Examiner suggests using the language from page 3, lines 10-18. Specifically, one cannot have one dividing line parallel to itself, which renders this claim indefinite.

In line 2 of applicants' claim 15 there is the limitation "several of the at least one dividing line extending [perpendicular] to one another." This is an extremely confusing phraseology and the Examiner suggests using the language from page 3, lines 19-26. Specifically, one cannot have one dividing line perpendicular to itself, which renders this claim indefinite.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

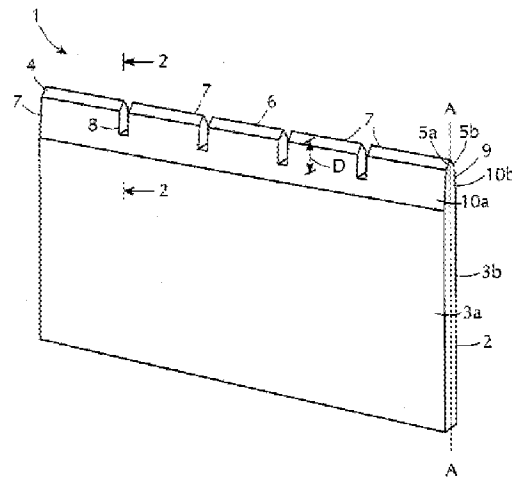
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 12 and 13 rejected under 35 U.S.C. 102(b) as being anticipated by Zimmer et al. (5,537,905).

Zimmer et al. disclose the invention in Figure 1, and parts **7** and **8**. At col. 6, lines 10-12, Zimmer et al. disclose that there are "four teeth **7** or **17** per inch of rule and the notches or nicks **8** or **18** have a width not greater than about 0.007 inch." These

relevant facts yields three notches separating four teeth in 1 inch of blade. Even assuming the maximum 0.007 inches for the three notches, one arrives at four teeth having an average width of 0.245 inches. A film prepared using the device of Zimmer et al's Figure 1 clearly anticipates applicants' claims 12 and 13.

FIG. 1



9. Claims 12-14, 16, 18, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Grawey et al. (5,055,734).

Grawey et al. disclose the devices of Figures 1 and 2.

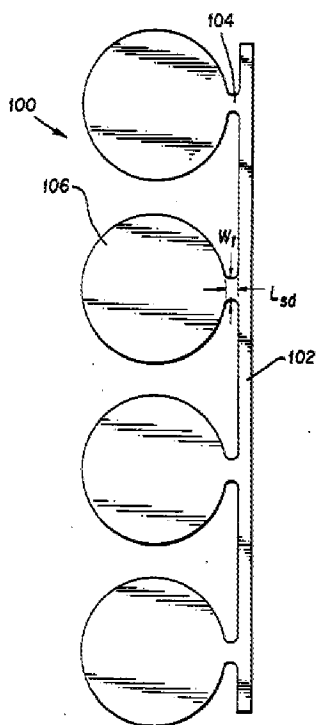


FIG. 1

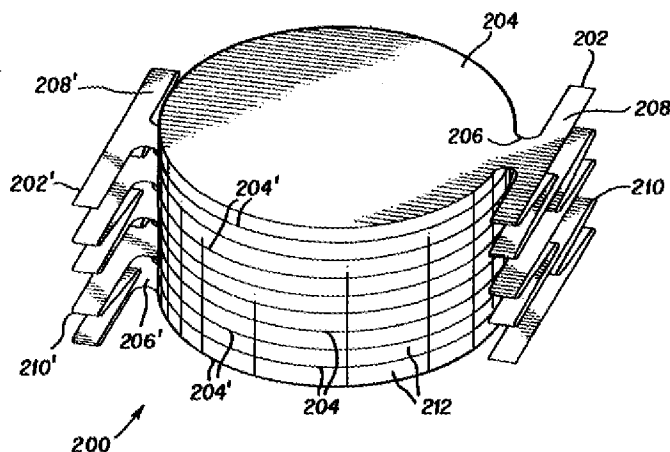


FIG. 2

The film of Figure 1 has a dividing line that stretches vertically in between the parts **102** and **106**, which is interrupted by the webs **104**. It is clear from the figure that the webs have a width that is, on average, less than an average spacing between adjacent webs. Additionally, with regard to applicants' claim 13, it is very clear from Figure 1 that the width of all the webs, respectively, is less than the spacing to said adjacent webs.

With respect to applicants' claim 14, the parallel dividing lines they are speaking of would fall in between the parts **106** of Grawey et al., i.e. in the x-direction in Figure 1 above (left-to-right on the paper). Therefore, the mirror plane spoken of in applicants' claim 14 would be in the y-direction (up-and-down) and it clear that performing a reflection about said mirror plane of the device of Figure 1 would generate a device that would not be superimposable. Equally, with regard to applicants' claim 16, a 180°

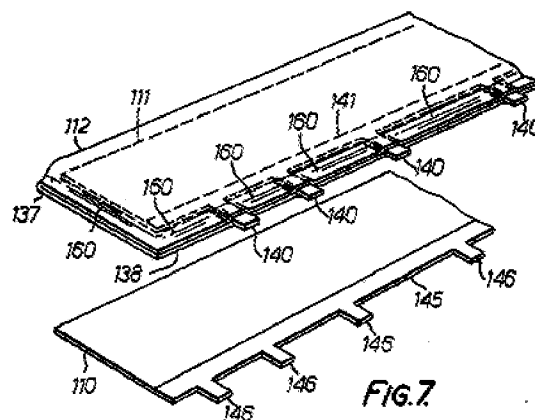
rotation performed on the device of Figure 1 would generate a device that would not be superimposable with the original device.

With regard to applicants' claim 18, the device of Grawey et al. is designed as a "multiple electrode conductor for piezoelectric solid state motor stacks" (col. 1, lines 9-11). Cathodes or anodes are electrodes and therefore this anticipates applicants' claim 18.

With regard to applicants' claims 20 and 21, the device of Figure 2 anticipates the limitations of these claims. Two of the same devices of Figure 1 of Grawey et al. are arranged such that the webs are not superimposed in alternating layers. Additionally, the alternating layers are arranged to differ by 180° of rotation.

10. Claims 12, 13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Peters et al. (4,053,695).

Peters et al. teach the device of Figure 7, which is designed for use in "lead acid electrochemical cells" (col. 1, line 3-4).



The device is a series of electrodes having webs **140** and **146** that clearly have a width, on average, less than the average spacing between adjacent webs, and also where the width of all the webs, respectively, is less than a spacing of the webs to a neighboring one of the webs, respectively. This device anticipates applicants' claims 12, 13, 17, and 18.

Claim Rejections - 35 USC § 102/103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Michalik (4,951,967).

The Examiner notes the following product-by-process limitation in applicants' claims 12-20:

- the requirement for the films of the present invention to be "stamped films."

It has been held that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different

process.” Please see MPEP 2113 and *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Any film that comprises the structural limitations of applicants’ claims will be seen as anticipating said claims.

The perforation of sheets for a variety of purposes has been a well-known and well-established skill in the art. Michalik teaches the perforated sheet of Figures 3 and 8. Both Figures contain a dividing line **36** that is interrupted by a series of webs **39**. Michalik discloses the width of the webs “a” as “about 0.5 to 3 mm” at col. 4, line 9, further they refer to the webs as being “small” at col. 4, line 61, and clearly the drawings reflect the distance “a” as being smaller than the width of the cut section **35**; however, with respect to applicants’ claims 12 and 13 they silent with respect to the specific distances of the cut section **35** compared to the webs **39**. The Examiner has reason to believe from the dimensions of the drawings that the webs have a width that is, on average, less than an average spacing between two adjacently positioned webs, and also that the width of all the webs, respectively, is less than a spacing of the webs to a neighboring one of the webs, respectively.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the dimensions of the cutting blades and the spacing in between adjacent cutting blades to arrive at a sheet having web widths appropriate for applicants’ intended use such that the webs had a width that is, on average, less than an average spacing between two adjacently positioned ones, and also where the width of all the webs, respectively, is less than a spacing of the webs to a neighboring one of the webs, respectively. The technique of die cutting is well known

Art Unit: 4174

in the art and would have generated predictable results to one having ordinary skill in the art.

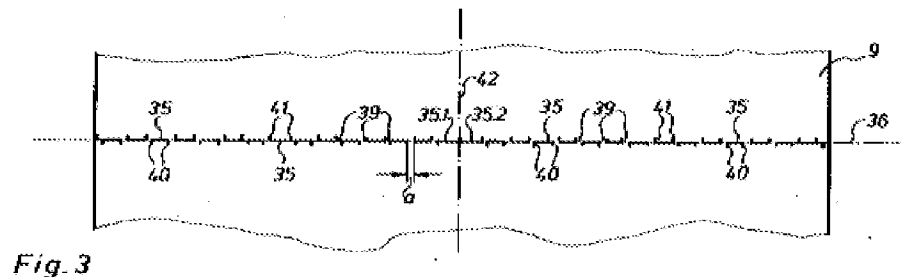


Fig. 3

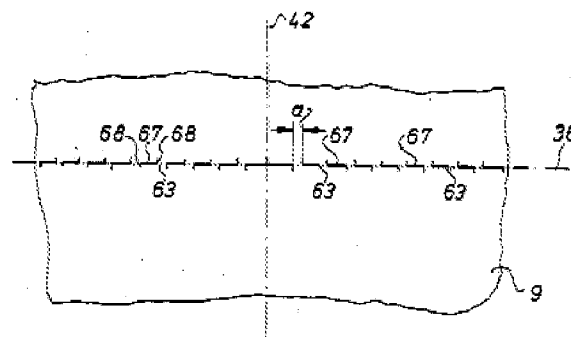


Fig. 8

Claim Rejections - 35 USC § 103

13. Claims 14-16, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michalik (4,951,967).

Michalik teaches or renders obvious all the limitations of applicants' claims 12 and 13 as seen in section 12 above; however, with regard to applicants' claim 14 Michalik fails to specifically teach a film with multiple cuts in the y-z plane, wherein the webs of said y-z plane would not be superimposable after a reflection about the x-z mirror plane. In this instance the Examiner deems the cuts along the line **36** to be equivalent to the aforementioned cuts by applicants along said y-z plane. The Examiner further notes that if one performs the mirror plane reflection about the line **42**,

a plane perpendicular to the cuts along the line **36**, seen in Figure 3 of Michalik, the perforated sheet overall would not be superimposable.

Since it is a well-known skill in the art to machine perforating blades to different sizes, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have perforating teeth with a variety of widths such that one would arrive at a sheet that would not have superimposable webs.

With regard to applicants' claim 15, Michalik fails to specifically teach a film with at least one cut in the x-z plane, wherein the webs of said x-z plane would not be superimposable after a reflection about the y-z mirror plane. In this instance the Examiner deems the cut(s) along the line **42** to be equivalent to the aforementioned cut(s) by applicants along said x-z plane. The Examiner further notes that if one performs a mirror plane reflection on line **36** in either the embodiment of Figures 3 or 8, the resultant perforated sheets overall are not superimposable.

Similar to the logic used above for applicants' claim 14, it is a well-known skill in the art to machine perforating blades to different sizes and shapes, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have perforating teeth with a variety of widths such that one would arrive at a sheet that would not have superimposable webs.

With regard to applicants' claim 16, if one performs the 180° rotation about the central axis at the intersection of lines **42** and **36** of Figure 8, the resultant perforated sheets overall would not be superimposable; however, Michalik fails to teach a film

Art Unit: 4174

having webs that were not superimposable after performing a 180° rotation about a central axis.

Again, since it is a well-known skill in the art to machine perforating blades to different sizes and shapes, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have perforating teeth with a variety of widths such that one would arrive at a sheet that would not have superimposable webs.

With regard to applicants' claims 20 and 21, if two sheets of the type of Figure 8 were arranged in a staggered arrangement, it would render obvious applicants claim 20. Furthermore, if one of the two sheets were staggered from the other sheet and then rotated by 180° about the central axis located on the line **36**, it would result in an article that renders obvious applicants' claims 20 and 21.

Finally, since it is a well-known skill in the art to machine perforating blades to different sizes and shapes, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have perforating teeth with a variety of widths such that one would arrive at a sheet that would not have superimposable webs.

14. Claims 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grawey et al. (5,055,734), in view of Bechtel et al. (6,402,328), as applied to claims 12 and 20, respectively.

Grawey et al. disclose the limitations of applicants' claims 12 and 20 as seen in section 9 above. They also disclose the use of the aforementioned devices as a

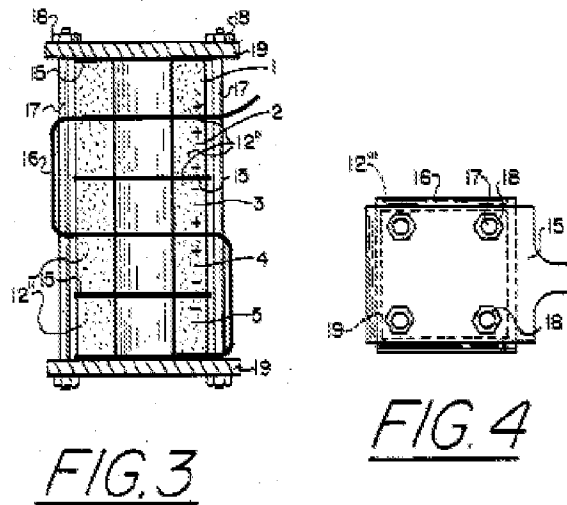
transducer, more specifically an actuator; however, they fail to specifically disclose the use of said devices as either an electrochemical or electrochromic device.

Bechtel et al. disclose the use of transducers in the field of electrochromic automatic dimming rearview mirrors.

Both Grawey et al. and Bechtel et al. are drawn to transducers, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the known device of Grawey et al. in an electrochromic device such as the one described by Bechtel et al. The combined device would have produced predictable results to one having ordinary skill in the art.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grawey et al. (5,055,734) in view of Abbott (4,499,566), as applied to claim 12.

Grawey et al. disclose all the limitations of applicants' claim 12 in section 9 above; however, it fails to disclose positioning holes. Abbott discloses the transducer stack seen in Figures 3 and 4.



The transducer stack comprises 2-4 positioning rods **17** (col. 4, lines 3-9), which obviously must have positioning holes for the positioning rod to go through said transducer stack.

Both Grawey et al. and Abbott are drawn to transducer assemblies; therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the known prior art element of positioning holes in the transducer assembly of Grawey et al. Each element would have performed the same function as it did separately, and the results of this combination would produce predictable results to one having ordinary skill in the art.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerard T. Higgins, Ph.D. whose telephone number is 571-270-3467. The examiner can normally be reached on M-F 7:30am-5pm est. (1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 4174

Gerard T Higgins, Ph.D.
Examiner
Art Unit 4174
/Gerard T Higgins, Ph.D./
Examiner, Art Unit 4174